



GOVERNMENT OF WESTERN AUSTRALIA

Comment on

Discussion Draft

**Productivity Commission
Inquiry into
Road and Rail
Freight Infrastructure
Pricing**

December 2006

**Department for Planning and Infrastructure
441 Murray Street
PERTH WA 6000**

PRODUCTIVITY COMMISSION INQUIRY INTO ROAD AND RAIL FREIGHT INFRASTRUCTURE PRICING

WESTERN AUSTRALIA'S COMMENTS ON THE PC DISCUSSION DRAFT

General Remarks

The Western Australian Government recognises that the Productivity Commission (PC) has undertaken an ambitious task and had limited time for the review to be able to get into the detailed financial, economic and social cost analysis that were sought in its terms of reference.

Nevertheless, it is disappointing to note from the PC Discussion Draft that the PC Inquiry will not provide the much anticipated "more definitive" directions to the Council of Australian Governments (COAG) and the Australian Transport Council (ATC) on broad pricing objectives for a future pricing regime.

Western Australia (WA) strongly supports the PC finding that heavy vehicles will not continue to pay their way if road charges remain unchanged and road expenditure continues to rise.

The ATC voted in June 2006 not to proceed with the Third Determination of heavy vehicle charges until the PC completed its inquiry. It is clear that the ATC will now need to implement an interim Determination of heavy vehicle charges in 2007-08. ATC will also need to consider whether the current road pricing methodology, ie. PAYGO, should be replaced with a more direct pricing method for the longer term.

It has been noted by WA that assumptions made in the PC Discussion Draft appear to be based on road-rail pricing issues in the Eastern States, which is primarily domestically-focussed, rather than addressing issues presented by a freight-focussed, export oriented transport task as is the case in WA. In this submission, WA will provide a number of examples of road-rail pricing issues experienced in this State.

WA has reviewed the PC Discussion Draft and provides the following comments under the headings of:

- Heavy Vehicle Road-User Charges;
- Adopting New Road Pricing Instruments and Institutional Reform for Road Provision;
- Government Involvement in Transport Infrastructure;
- Regulatory Reform for Rail;
- Externalities and Incremental Pricing; and
- Modelling Impacts of Reform.

Heavy Vehicle Road-User Charges

Key Comment(s) and/or Concern(s)

Investigation of road/rail competitive pressures should have been directed at the individual vehicle class, rather than for heavy vehicles as a group. In WA, significant differences in cost recoveries and cross-subsidies can be demonstrated between vehicle classes. In some cases of mineral ore and grain movement there is direct competition with rail services.

The pricing regime must balance an increase in freight charges for the multi-combination classes of vehicles to reduce the under-recovery against the limited capacity of WA's remote communities to pay for a cost-reflective pricing regime.

The PC concluded that heavy vehicles as a group pay their way over time under PAYGO. It further acknowledged that network averaging has created cross-subsidies between heavy vehicles accessing different parts of the network. While B-doubles have been identified as a vehicle class that does not cover its attributable network costs, the PC was unable to conclude that increasing charges for these and other heavy vehicles competing with rail on the basis of network-wide cost allocation would necessarily increase rail market share.

The PC further concluded that for full-cost recovery, charges for lightly used regional roads could increase significantly, and could fall on heavily used arterial roads. For example, the estimated attributable costs of B-doubles using a local road are as much as 50% higher than the cost of them using an average arterial road.

In WA, there are a number of examples of the movement of bulk material by road where attributable costs are clearly not being covered. There are situations where increases in heavy vehicle charges could have a significant benefit on rail's modal share. There are also a number of cases in WA of mineral ore and grain movement where there is direct competition between road and rail services.

The WA freight task is enormous with small population centres and long freight lines. Goods are transported across vast distances because of the size of the State, its isolation from other Australian States and Territories and the dispersed location of its agricultural, mining, production and population centres.

Heavy vehicles covering large annual distances on lightly trafficked regional roads in WA are cross-subsidised by vehicles using more heavily trafficked roads, or travelling shorter distances. WA supports some increase for the multi-combination classes of vehicles to reduce the under recovery. This would reduce the current level of averaging across vehicle classes. It is appreciated that averaging does advantage remote areas and rural communities and a reasonable balance needs to be struck between full cost recovery and the provision of services. Given that WA is an export-oriented economy, any pricing methodology related to the removal of cross-subsidies should not reduce long-term international competitiveness. While this approach may not be economically "pure" it avoids the complexity of Community Service Obligations (CSOs) and freight subsidy schemes.

The PC Discussion Draft notes that road and rail compete for bulk freight in some regions but it seems to brush over the implications. In WA there are a number of specific examples where this occurs with major local impacts. In one example

government support for the rail task along with the commitment of the freight originator has ensured a long-term rail operation for the transportation of logs and woodchips. Regulation has been required in another situation to ensure rail is used for bulk iron ore cartage and in the grain belt the long-term future of grain cartage by rail is uncertain. These are specific high profile examples of local impacts but there are many other instances where more limited but similar issues occur. Further details can be found in Appendix 1.

Equally, many bulk products such as alumina, nickel and caustic soda are currently transported by rail in WA, and are unlikely to switch to road transport except where there is no alternative. The need to ensure competitive freight pricing between modes remains, otherwise distortions are likely to occur which could negatively affect the most efficient and effective mode of transport.

It needs to be stated that cross-subsidisation of road user charges for heavy vehicles in WA is a key element of the social fabric in Western Australia. It is a practice that distinguishes public roads from commercial railways. Cross-subsidisation through the public sector provides people and industries across the State with near uniform services no matter where they are, in services such as health, education, water, electricity and roads.

Reducing road user charges cross-subsidisation would have some undesirable impacts in regional and remote areas. Clearly, there is a need to find an approach that will provide the right balance. In deciding on a pricing regime, the PC must take into account the need to an increase in freight charges for the multi-combination classes of vehicles to reduce the under-recovery, and the limited capacity of WA's remote communities to pay for a cost-reflective pricing regime.

Adopting New Road Pricing Instruments and Institutional Reform for Road Provision

Key Comment(s) and/or Concern(s)

The PAYGO approach should be retained until a compelling case can be made to adopt new road pricing instruments, such as mass-distance or location-based charging. The present system is simple, low cost to administer and works well.

The new system would need to be cost-effective, and the socio-economic disadvantages arising from higher charges on certain roads and regional areas will have to be addressed (refer to comments made in previous section).

WA supports a scheme that links heavy vehicle charges more directly to road investment and for any increase in charges to come back to the State.

Mass-distance and location-based charging are alternatives to the current registration and fuel charge, which favours vehicles that travel large annual distances. A move to distance or location charging could reduce the cross-subsidy to these vehicles from the likes of farm heavy vehicles and ancillary operators who do relatively small annual kilometres.

However, care must be taken in moving to an electronically-based charging system, to ensure that the advantages outweigh the disadvantages. WA would need to be

certain that such a system can be cost-effectively implemented, given the difficulties experienced by jurisdictions overseas that have introduced these new systems.

As there may be considerable cost and risk associated with an approach of full mass-distance or location-based charging, WA would support a staged approach, which allows technology and systems that would be required for a more comprehensive pricing regime to be tested. Although there are advantages to an electronically-based charging system, if it is based on very modern technology, it is likely to be costly, risky, hard to understand, and may be unreliable.

WA would support a scheme that linked heavy vehicle charges more directly to road investment and for any increase in charges to come back to the State. The perception that such charges are just another tax will continue unless there is some certainty that funds are directed into a dedicated State administered road fund. WA would support greater consideration of this concept.

Improvements to institutional arrangements concerning the management of roads will depend on the ability to link road charges to expenditures. The PC Discussion Draft has not addressed how this is to be achieved, and it would seem that the options other than the current “political” process should be offered for review.

Government Involvement in Transport Infrastructure

Key Comment(s) and/or Concern(s)

While rail subsidies could affect competition between the road and rail modes, potentially leading to an economically inefficient modal choice, there can still be sufficient justification. Robust information is required to ensure the benefits are soundly based.

The Inquiry recognised that road and rail transport occurs in quite different regulatory, operating and commercial environments. This results in different outcomes for infrastructure investments. In general, governments provide road infrastructure, while a considerable amount of rail infrastructure is provided commercially and privately. The differences are highlighted below:

Road Construction Projects	Private Rail Construction Projects
<ul style="list-style-type: none"> • Government accepts the risk for construction 	<ul style="list-style-type: none"> • Private industry accepts the risk for rail construction and charges a commercial premium
<ul style="list-style-type: none"> • Justified over a long time period 	<ul style="list-style-type: none"> • Requires returns over a shorter commercial time period
<ul style="list-style-type: none"> • Low hurdle rate (often around 7%, but generally less for regional road projects) 	<ul style="list-style-type: none"> • Must meet a much higher commercial rate (double digit)
<ul style="list-style-type: none"> • Benefits, costs and risks are shared across many demands 	<ul style="list-style-type: none"> • Many rail projects have single users who must therefore pay a risk premium

<ul style="list-style-type: none"> • Takes account of a wide range of social, environmental and economic benefits 	<ul style="list-style-type: none"> • Only considers internal company returns and ignores external effects such as road damage effects
<ul style="list-style-type: none"> • Considers future scenarios and transport demands 	<ul style="list-style-type: none"> • Require a commercial return upon commencement of first use
<ul style="list-style-type: none"> • Is dependent on (large) government capital capacity 	<ul style="list-style-type: none"> • Often depends on private company capital capacity

The outcome is suboptimal investment in rail infrastructure, resulting in higher freight and government costs.

The consequences of these different environments is that the road use charge is set lower than if its circumstance was the same as rail. The PC should investigate this situation and propose mechanisms to reduce this imbalance. One mechanism is for governments to take some of the risk for new rail investment in the form of rail subsidies, provided there are protections from other pricing distortions, such as profit above a commercial rate.

Regulatory Reform for Rail

Key Comment(s) and/or Concern(s)

WA has experienced further vertical separation of its rail freight business since ARG sold its above and below rail operations to different organisations. The effect that this will have on the viability of the WA rail freight business and network remains to be seen.

WA believes that it would be impractical to impose an access regime on parts of a network and not on other parts based on the level of competition.

The PC should investigate the differences between road and rail infrastructure investment. If it finds there is an imbalance, propose mechanisms to reduce it, particularly to take account of factors external to the commercial rail industry.

The PC has recommended vertical reintegration of rail services to improve commercial viability given the mixed success of vertical separation in encouraging above rail competition.

In 2000, the WA Government sold the freight business of the WA Government Railways to the Australian Railroad Group (ARG). The business was sold as a vertically integrated business because the Government recognised the significant synergies that occur between the above-rail and below-rail business units and the efficiencies that would have been lost should it separate the rail freight business.

However, to capture the benefits of above-rail competition, the Government legislated, under the *Rail Freight Systems Act 2000*, a requirement for the buyer of the business to create a separate commercial entity to operate the below-rail business for the standard gauge network. This requirement was not imposed on the narrow gauge network, because of the limited scope for competition.

As the PC would be aware, further vertical separation has occurred with the recent commercial decision by ARG to sell its Western Australian below-rail business to Babcock and Brown and its above-rail business to Queensland Rail. Time will tell as to how the vertical separation will affect the viability of the WA's rail freight business.

The PC has also recommended a review of the need for access regulation of vertically separated rail networks where pricing by vertically separated below-rail operators is significantly constrained by competition from road and sea freight transport operators.

While there may be scope to revoke regulation for vertically-separated below rail operators, it would be extremely difficult to implement as one would have to determine which parts of the network are being price-constrained by competition from road and sea transport. To impose an access regime on part of a route of an access seeker because there is no competition, and not on the remaining part because there is, would be impractical.

It should be noted that the WA Rail Access Regime is not a mandated regime but only provides a legislated safety net to the provision of access. Any access seeker wishing to enter into a commercial access agreement with the railway owner can negotiate access "inside" or "outside" the regime. Regardless of whether the rail network is vertically integrated or separated, WA is of the view that this flexibility provides the right balance and leaves the option to both the rail infrastructure provider and access seeker as to whether they wish to be regulated or not regulated under the regime.

To ensure that private sector owners of rail infrastructure assets do not "accept comparatively low rates of return if they expect government contributions to be forthcoming in the future to support the infrastructure", WA has adopted the following assessment criteria:

- Does the business have the capacity to invest (eg. start up companies with low cash flow or asset base)?
- Is the business able to take account of long term potential (eg. the first of several mines to commence operation, when more than one mine is required to provide a commercial return)?
- Has the business taken account of externality effects (eg. pollution, road damage if the freight was carried on road).

WA has previously proposed to the PC that the following government investment principles should apply:

- Ownership and funding of transport infrastructure can be separated;
- Those who fund transport infrastructure that is strategic to the State (Government or private) are entitled to a commercial return on investment of at least the social discount rate. The ability to earn higher returns is subject to commercial risk;
- Users of the infrastructure be required to pay for its use in proportion to the rate of consumption and cost recovery pricing should reflect this;
- Where a transport infrastructure asset is strategic to the interests of the State, Government may consider retaining ownership;
- Where commercial use of transport infrastructure results in costs imposed on the community then Government will seek to recover these costs through appropriate pricing mechanisms;

- The pricing mechanism will be used to ensure competitive equity between all transport modes and need to be sophisticated enough to take account of the position of remote areas;
- State strategic transport infrastructure assets will be accessible to all users provided there is no net cost impost by a new user over existing users. Cost recovery prices will be recomputed each time a new user is admitted with a decrease in the impost to earlier users; and
- Where transport infrastructure users are unable to meet the full cost of their use which is in the community interest then Government may decide to subsidize its use either through capital funding or capital recovery mechanisms or the purchase of services to a quantum and service level deemed appropriate for the community being served.

Externalities and Incremental Pricing

Key Comment(s) and/or Concern(s)

Further research on the issue of pricing of externalities is required. There are some transport tasks where significant externalities have not been adequately taken into account and the means to manage these requires consideration. WA believes that there is sufficient information available to initiate charging of some externalities at least at an introductory level, for both road and rail.

WA supports an investigation into incremental pricing for higher axle mass limits to target specific under recovery.

Further research on the issue of pricing for externalities is required. While the broad thrust of the PC Discussion Draft is that externalities are being generally addressed there are some freight tasks where there are significant externalities which are not being addressed. These tasks are contestable by both road and rail and failure to address under recovery and externalities will disadvantage rail (or road) and lead to increased community costs.

While there is considerable debate about accurate costing of externalities, there is sufficient information available to initiate charging of some externalities at least at an introductory level. Pricing of externalities could be considered as part of incremental pricing.

In WA some forms of incremental pricing are already in place, in particular, a Bulk Cargo Scheme and a Certified Weighbridge Mass Management Scheme. Both allow higher mass in exchange for a fee and a system that ensures compliance.

The Bulk Cargo Scheme allows participating operators a higher mass limit on tri-axle groups only (up to 23.5 tonnes). They must maintain records, which prove they rarely exceed this limit and on the occasions when they do, the excess is relatively small. The Certified Weighbridge Mass Management Scheme allows for 21.5 tonnes on tri-axles and 17 tonnes on tandems where the truck is weighed on a certified weighbridge prior to using the public road. Entry into the Bulk Cargo Scheme in particular is not automatic. The impact on the road system is carefully considered as is the potential of rail to carry the cargo.

Modelling Impacts of Reform

Key Comment(s) and/or Concern(s)

If COAG is using the estimated figures to assess the benefits of the National Reform Agenda, then the PC should provide further clarification on its 10 percent and 5 percent productivity increase assumptions for road and rail respectively, and what, if any, modelling assumptions were made about differences in the road and rail ownership and operating environments between the various jurisdictions.

The PC has modelled a 10 percent increase in the productivity on all inputs to the production of the road freight task, and similarly, a 5 percent increase on all inputs to the production of the rail freight task rail to obtain some “outer envelope” estimated of economic impacts to the Gross State Product in each jurisdiction.

The assumption made by the PC was that productivity improvements leading to increases in economic output would, in the main, come from more efficient allocation of resources as a result of improvements in institutional structures and regulatory reforms. It is understood that the respective 10 and 5 percent increases in road and rail productivity for road and rail did not explicitly consider shifts in technological knowledge and capabilities, or differences in environmental or operating circumstances.

Using a multi-regional general-equilibrium (MMRF) model from Monash University, the increase in productivity was estimated to increase the WA Gross State Product by 2.21 percent real (as compared to 0.22 percent for NSW, 0.48 percent for Victoria, 0.50 percent for Qld, 0.62 percent for SA, 1.47 percent for Tasmania, 0.69 percent for NT, 0.02 percent for ACT, and 0.62 percent Nationally).

The result of this modelling is interesting at best. However, WA now understands that these estimates are to be adopted by the Council of Australian Governments (COAG) to assess the benefits of the National Reform Agenda.

If this is indeed the case, then the PC should provide further clarification on:

- Whether it is realistic to assume that all jurisdictions will equally experience a 10 percent productivity increase in road freight and a 5 percent productivity increase in rail freight as a result of implementing the PC's recommendations; and
- What modelling assumptions have been made about differences in the road and rail ownership and operating environments between various jurisdictions.

It is accepted that jurisdictions, like WA, whose industries have high export content and large freight demands will have the largest increase in economic activity. WA would also acknowledge that, on the whole, regions with the largest freight tasks, and hosting those industries with large export gains, tend to benefit the most from improvements in the productivity of the freight sector.

However, WA already has liberal laws for heavy vehicles, an extensive road train and B-double network, and a comprehensive system of incremental pricing for higher axle mass limits in place. Furthermore, the WA rail freight network was privatised since 2000 and is operating as efficiently as any other railways in Australia, and the Pilbara rail network, which transport a significant portion of WA's iron ore exports, are already operating at world's best standards.

As these factors are already contributing to a highly productive land transport industry in WA, it is arguable that a further 10 percent and 5 percent productivity increase for road and rail freight respectively could be readily achieved in WA.

Appendix 1

Example 1 – North Greenbushes

The Picton to Manjimup Railway has served the native timber woodchip industry for the last 20 years. In 2000, wood chipping of native forest timber began to reduce in line with Government native forest management policy. This decline in allocation of native timber for woodchips saw woodchip output drop from 800,000 tonnes per annum (tpa) to 250,000tpa. Thus the freight rates charged for this rail service increased from an average of 12% higher than road transport (approx. \$0.5 million pa) to 50% higher (approx. \$2.23 million pa). If the rail service to Bunbury Port ceased, this freight would be transported by road, resulting in an extra 36,000 road train journeys per annum (or 144 each weekday) on South West roads.

An initiative was identified where rail freight could terminate at a proposed intermodal terminal at North Greenbushes to minimise travelling over the most costly part of the railway to operate on and maintain. Two scenarios were presented for the transport of 400,000tpa of logs and 350,000tpa of woodchips: truck direct from plantations or mill by road to the Bunbury port, or; truck from plantations and Lambert mill near Manjimup to North Greenbushes and rail to the port, and transport freight from outer catchments direct to the port by road.

The Government therefore had an option to invest either in upgrading the South West Highway to improve safety and road standard or provide \$14.45 million in infrastructure and upgrades at North Greenbushes and \$2.23m for the surrounding road network to bring the road/rail option closer to being competitive with the road-only option. If invested in North Greenbushes, the benefits for the Government and the community would include:

- Continued employment of road transport, to deliver to rail head;
- Ten years of guaranteed rail operations on the railway line;
- Minimised environmental, congestion and social impacts (the annual saving in externality costs by using road-rail option was calculated at around \$734,400);
- Reduction of heavy haulage road transport on key State highways, particularly in higher populated and congested areas closer to regional ports;
- Other plantation timber companies may be encouraged to use rail;
- Tangible outcome of Government's policy to increase rail freight.

The State Government decided to provide a funding package to address the "gap cost" between the cheaper road only option and the road/rail option by improving the State-owned road and rail infrastructure and providing the necessary intermodal terminal. The woodchip export company and railway service provider each contributed like value (new capital expenditure for woodchip and log handling and storage equipment, train loading/unloading facilities, railway rolling stock, etc.) to the project resulting in a successful public-private partnership. Governments at times will face the need to participate/intervene in modal choice issues for major projects where social and environmental impacts are of sufficient importance.

Example 2 – Mid West Region

Several iron ore ventures are starting up in the Mid West Region of WA, looking to export from the regional port of Geraldton in the short-term and a proposed deep-water port at Oakajee (20 km north of Geraldton) in the long-term. The start-up mining operations each aim to export up to 2 million tpa of iron ore for around seven years. The proponents have been strongly encouraged by Government to consider using rail as an alternative to the initially cheaper trucking option. Government's aim is to minimise accelerated damage on the existing aged road network and to limit the number of road trains operating on congested (or inappropriate) road transport routes. While rail is ultimately cheaper to use, it requires a substantial up-front capital cost to users to establish, where road transport does not.

The following is an assessment of road and rail costs and externalities from one of the larger iron ore companies about to commence operations.

	Rail		Road
Supply Chain	<ol style="list-style-type: none"> 1. Load truck at mine site 2. Truck to rail siding and unload 3. Load onto rail 4. Rail to Geraldton 5. Unload at Geraldton 		<ol style="list-style-type: none"> 1. Load truck at mine site 2. Truck to Geraldton 3. Unload at Geraldton
Vehicle Movements	<ul style="list-style-type: none"> • 1 train a day with 60 wagons, payload of 2750 tonnes 		<ul style="list-style-type: none"> • 50 a day, payload of 55t • 35 a day, payload of 80t • 27 a day, payload of 100t
Price comparison to road	Rail operator owned wagons \$1 cheaper	Mining company owned wagons \$3 cheaper	
Year 1 capital required to be spent by mining company	<ul style="list-style-type: none"> • Rail wagons capital guarantee – \$4m reducing • Rail siding – \$1m • Front End Loader (FEL) at rail siding – \$0.5m • Track bank guarantee – \$2m reducing Total = \$7.5m	<ul style="list-style-type: none"> • Rail wagons capital – \$7m • Rail siding – \$1m • FEL at rail siding – \$0.5m • Track bank guarantee – \$2m reducing Total = \$10.5m	<ul style="list-style-type: none"> • Truck unloader - \$2m • Truck capital guarantee – \$6m (maybe nil)
Lead time to start	Rail wagons: 9 – 12 months Rail siding: 6 – 9 months		Heavy vehicles and tippers: 0 – 6 months
Externalities			<ul style="list-style-type: none"> • \$3.1m per annum • (DPI assumes 1.5 cents per NTK worse than rail)

WA has required iron ore road haulage operations to be licensed under the Transport Coordination Act and for those operations within 100 km of a serviceable railway to use rail. Under this arrangement, the Minister has issued permits to mining companies to allow them to haul bulk iron ore by road transport, however these are subject to limited timeframes considered appropriate for the tasks to be shifted from road to rail.

Example 3 – WA Grain Network

A Western Australian Strategic Grain Infrastructure Study was undertaken by consultants in 2005. The study found that rail has 83% of the grain freight task in net tonne-kilometres, and that the rail network saves the roads from the impact of approximately 3.6 billion export grain gross tonne kilometres (gtks), saving the State around \$23m per year in road expenditure.

The absence of the grain rail network would double the number of freight gtks currently generated on grain belt roads. These roads are currently consuming an estimated \$70m per year in State funds. An estimated annual increase in road expenditures of \$23m to deal with a doubling of the freight task is probable. Externality cost savings are estimated at a further \$11.9m.

ARG/Westnet Rail have indicated that they are unlikely to be able to fund major track upgrades necessary to support rail services to the grain industry under current commercial circumstances. The uneven nature of cyclic resleeper requirements carries unreasonable risks in an environment where achievable rail access charges do not cover even the annualised representations of these costs used in the model.

The following table illustrates the difference between the current and viable rail positions and the road position regarding cost per tonne of freight. Current rates are under “Current Market Rate”, which shows that road is currently in a much better position than rail to attract freight. However, if road were to compensate for its under-recovery of long-term infrastructure costs, road and rail would be highly competitive.

Market Rates Comparison of Rail and Road for an average location (\$ per tonne)			
Average harvest MTPA on rail = 5.7			
Average haul km	Rail: 280		Road: 240
	Rail Current Position ¹	Rail Viable Option ¹	Road Current Position
Line haul	\$6.93	\$12.65	\$16.32
Track/road	\$6.37	\$11.47	
Current Market Rate	\$13.30	\$24.12	\$16.32
Under-recovery of long-term infrastructure costs	\$6.42	\$6.42	\$15.66 ²
Total	\$19.72	\$30.54	\$31.98

¹ Estimates provided by ARG, Westnet Rail and Cooperative Bulk Handling.

² Preliminary indicative figures provided by Main Roads WA .